4. CIRCULATION

INTRODUCTION

Milpitas has two major interstates (I-880 and I-680) that traverse the area, as well as several regional arterials, including Calaveras Boulevard, Montague Expressway, Capitol Avenue, and Great Mall Parkway. All of these routes carry large volumes of traffic through Milpitas daily. In addition to the street and highway system, two major railroad lines bisect the city. While these transportation facilities provide excellent regional access and circulation, they also create barriers to local vehicular, pedestrian and bicycle movement, because crossings are limited.

The Midtown Planning Area is within an area that experiences severe congestion during peak hours as thousands of commuters drive to and from jobs in Santa Clara County. Current projections for growth indicate that the growing imbalance between jobs and housing will continue to worsen and commuters will face still longer delays in decades to come.[1] One of the clear opportunities to address the problems of regional congestion is to provide more housing opportunities in urban areas and focus housing and jobs around rail transit systems. Recent studies have found that residents living within three-quarters of a mile of a transit station are five times more likely to commute by mass transit than typical commuters in other areas. Similarly, residents whose jobs are near a transit stop are, on average, 2.7 times more likely to commute by rail than the average worker.[2] In the Bay Area, strong economic growth and worsening congestion is providing a strong impetus for commuters to switch to rail transit, as indicated by the record ridership increases on all major systems: the VTA's light rail system recorded ridership increases of 30% for the first six months of 2000; CalTrain ridership increased 20%; and Altamont Commuter Express posted a 60% gain during this period.[3]

The opportunity to provide commuters with the option of traveling by transit can be realized in Milpitas Midtown. Currently, Midtown is an important hub for bus transportation, and will soon be a significant rail transit destination as well (see Figure 4.1). The bus transit hub at Weller and Main Streets accommodates 14 VTA bus lines and is an interchange between the Santa Clara County VTA and the AC Transit systems. The VTA's Tasman East LRT line will extend through Milpitas and the Midtown Area providing light rail service to San Jose and Mountain View. Transit service will be running as soon as 2001 to stops just west of the Midtown Area (I-880 and Tasman Drive) and within the Midtown Area (Great Mall Parkway/Main Street and Montague Expressway) by 2004.

In addition to the Tasman East LRT line, the use of the eastern Union Pacific Railroad corridor for BART is being studied. The passage of the 0.5-cent sales tax to fund the extension of BART from Fremont through Milpitas to San Jose and Santa Clara (among other transit projects) will initiate more detailed studies and identify specific stop locations in and around the Midtown Area.

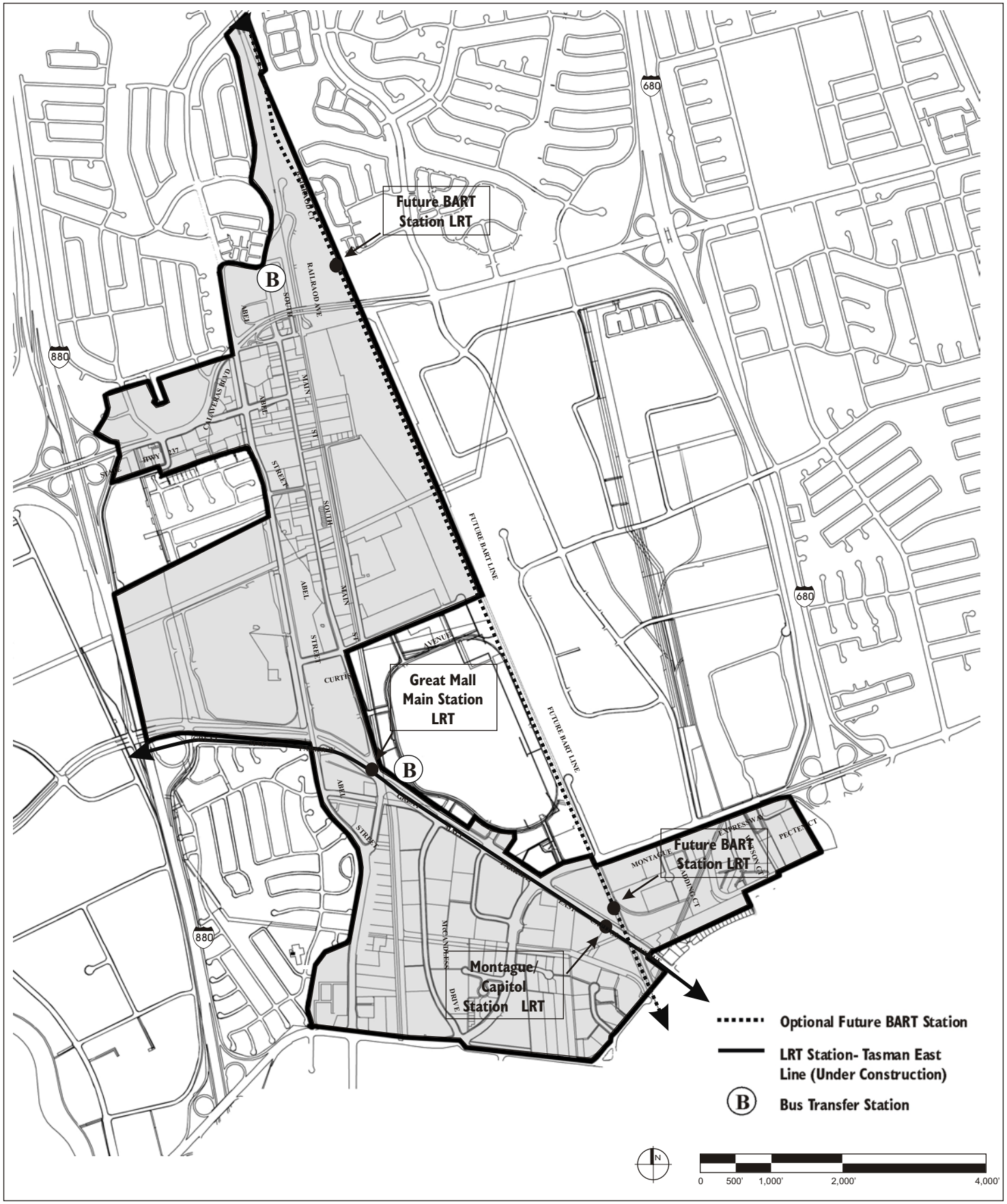

Figure 4.I: Transit Plan

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CIRCULATION GOALS

Goal 1: Improve the viability of the pedestrian, bicycle and transit systems.

Currently, sidewalks do not exist in some areas; streets are very wide and difficult to cross; high traffic volumes pose obstacles to bicyclists; and the railroad tracks create a significant barrier to efficient east–west circulation. The Specific Plan places a priority on improving the viability of non-vehicular modes of travel in the Midtown Area, in order to offer greater choices to those who live, work and shop in the community. The plan includes: wider sidewalks, traffic calming, streetscape improvements, pedestrian routes to transit stations, and improvements to a citywide trail network. Connections across the barrier created by the Union Pacific Railroad tracks are being explored for pedestrians, bicyclists, and automobiles, to improve accessibility to the Main Street area and circulation throughout the city.

Goal 2: Balance the need for through movement with livability and pedestrian-orientation.

Milpitas experiences high volumes of regional through traffic. In order to accommodate these demands, significant expenditures have been made to develop major automotive expressways. Despite these improvements, many intersections are congested during peak hours. In considering potential land uses and transportation improvements in the Midtown Area, the plan strikes a balance between regional traffic demands and the goals of developing a more livable area and a more pedestrian and bicycle-friendly transportation system.

The VTA's Tasman East LRT line will serve Midtown Milpitas.

Transit System Policies

The role of transit will assume greater importance in Milpitas and the region as a whole, as severe traffic congestion leads commuters to seek alternatives to driving. Policies contained within the Land Use Element provide for higher density development focused around the future transit stations. In addition to focusing development around transit stations, it is important to provide clear and direct pedestrian connections to the stations, and accommodation for bicycles and bus services. All of these factors can help boost transit ridership by reaching commuters that live farther from the stations.

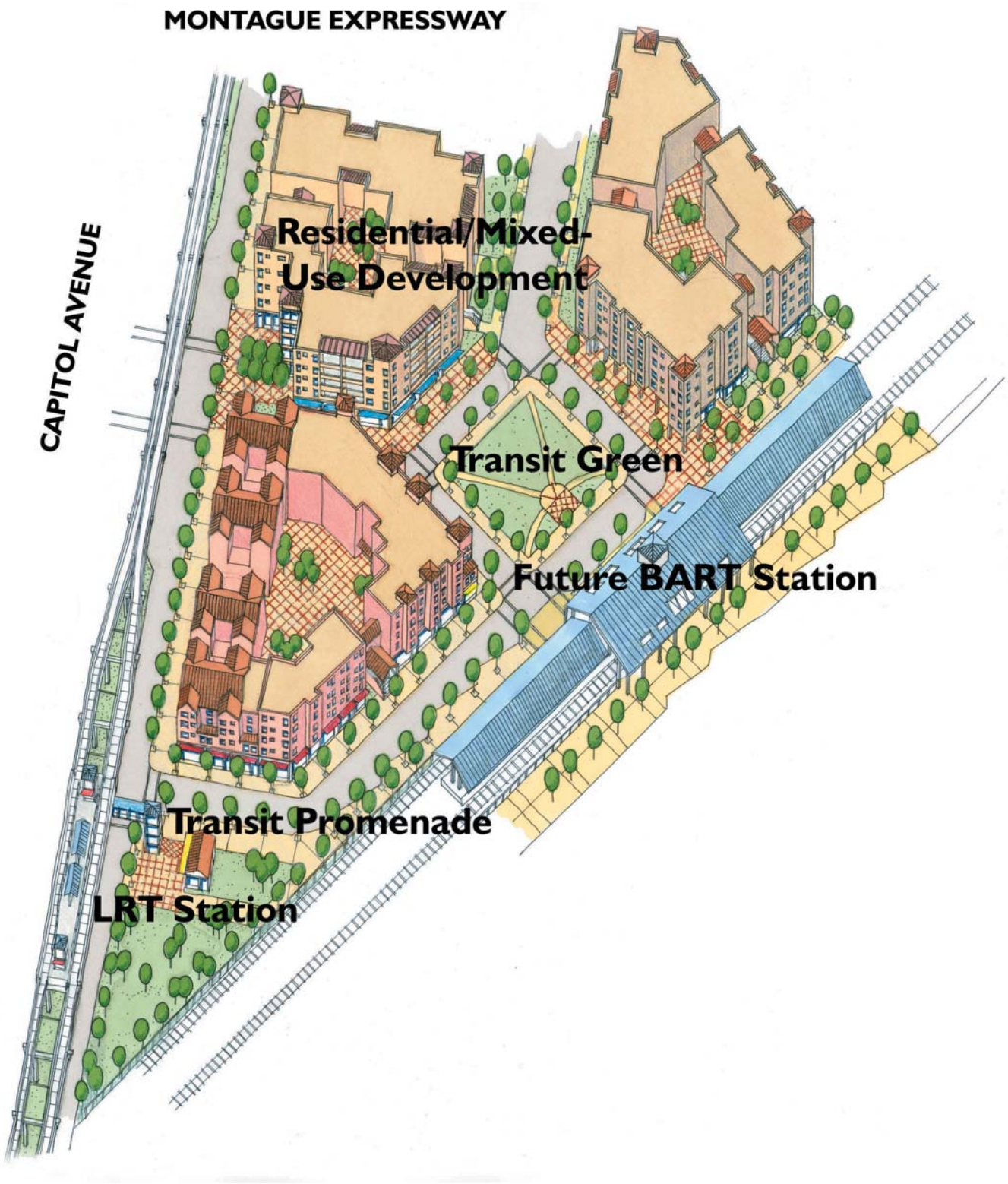

Figure 4.2
Axonometric View of the South Midtown Transit-Oriented Development

Policy 4.1: Work with the VTA and BART to ensure that the transit stations are attractive facilities which accommodate pedestrians and bicyclists.

The Specific Plan supports the Tasman East LRT stations, as well as future potential BART connections through the area. The City has worked with transit providers to ensure that these stations are attractively designed with amenities including attractive shelters and waiting areas, lighting, landscaping, route and schedule information, bicycle parking and well-marked and appropriately lighted pedestrian routes. The City will continue its collaboration with BART and VTA in the future.

Policy 4.2: Provide pedestrian connections between the transit stations and commercial, employment and residential destinations that are direct, attractive and interconnected with the larger city sidewalk and pedestrian path system.

Both the Great Mall/Main Street and Capitol/Montague LRT Stations are elevated and located in the median of major thoroughfares that carry high volumes of through traffic. The future BART stations within the Midtown Area should be designed to incorporate appropriate pedestrian connections. Sidewalks along these streets will be the primary means of station access for pedestrians. In these areas, sidewalks should be as wide as possible (i.e., 10 to 15 feet), and landscaped along the curbside to ameliorate, to the extent possible, the effects of traffic on pedestrians.

Great Mall/Main Street Station: Tree landscaping at the curb edge of streets is recommended. Light fixtures which are attractive and scaled to the pedestrian are also recommended. Where sidewalks adjoin parking areas (such as the Great Mall), the sidewalk edge should be landscaped with trees planted to create a canopy over the sidewalk.

Capitol/Montague Station: New development surrounding the Montague Station should provide direct pedestrian connections to the station. This includes connections through future developments that serve not only the needs of the area, but the community as a whole. More specifically, appropriate connections should be made between Montague Station and the city's creek trail system (see Section 8.0 for further details).

Policy 4.3: Support the establishment of BART service on the Union Pacific Railroad line.

The Specific Plan supports the efforts of the VTA and BART in developing higher levels of transit service in Santa Clara County and the region as a whole. Currently, BART, CalTrain and the VTA provide rail transit service that nearly rings the Bay Area. The remaining areas to be connected into this regional transit loop include the area between Fremont and Union City to San Jose, via Milpitas. A 0.5-cent sales tax increase was approved by the voters of Santa Clara County to fund a BART extension between Union City to San Jose. This plan supports the addition of rail transit service along the Union Pacific Railroad line.

Policy 4.4: Ensure that parking needed for the LRT and BART stations do not displace or otherwise diminish the potential for transit-oriented development.

For example, the land between Montague Station and a potential BART station on the Union Pacific Railroad line is a valuable resource for housing, and should not be suboptimized by automobile parking (see Figure 4.2). Preliminary studies estimate that 1,800 spaces would be required for a BART station in conjunction with a transit-oriented development at this site. New parking should be configured either east of the station, or beneath the residential development (i.e., as additional or shared parking). Parking for the LRT station should be configured parallel to the rail line rather than as a large parking lot in order to maximize the use of land near the transit stations for housing, and to minimize the effects of a large parking area on adjacent uses. Parking in a parallel configuration is typical along the CalTrain line on the San Francisco Peninsula, and provides joint use opportunities for station area parking. Approximately 90 parking spaces could be accommodated in a single bay, with 30 degree angled parking along the Union Pacific Railroad tracks, and 180 spaces could be accommodated in a double bay.

Street System Policies

The street system in the Midtown Area is characterized by several significant regional arteries, Calaveras Boulevard, Great Mall Parkway, Capitol Avenue, and Montague Expressway. These streets connect to the interstates and carry large volumes of traffic through the study area. Main and Abel Streets are minor arterials that also serve regional needs. During peak periods, these streets are often used as a bypass to congestion on I-880.

The concept for the street system in Midtown is to make improvements to the streets and intersections, as necessary to accommodate the flow of traffic; to improve the design of the streets to better accommodate bicyclists and pedestrians; and to develop new streets that are pedestrian-oriented in terms of scale and connectivity with the larger street system.

Policy 4.5: Maintain an interconnected pattern of streets within the Midtown Area. More specifically, streets developed to serve new developments should be pedestrian in scale and interconnected with the existing street system (see Figure 4.3).

In areas near Montague Station, and within the rail yards, there is the opportunity to create a street and block system that is pedestrian-friendly, and is interconnected with the larger street system. In these areas, blocks that are approximately 400 to 600 feet-long would create a pattern of streets that is more convenient and efficient for pedestrian movement.

Policy 4.6: Close a portion of Carlo Street (between Calaveras "Loop" and Abel Street) to vehicular traffic in order to improve traffic conditions at the intersection of Abel Street and Calaveras Boulevard.

This segment of Carlo Street does not provide access to adjoining parcels, and closure of this street will improve intersection operations at Abel Street and Calaveras Boulevard by eliminating an awkward leg of the intersection. It can be

reused as an open space with a pedestrian and bicycle link between Main and Abel Streets.

Policy 4.7: Provide a new bicycle and pedestrian-friendly street between Abel and Main Streets between Serra Way and St. John's Church.

A new public or private street should be developed in association with new development at Serra Way and Main Street. This would create a more pedestrian-oriented block pattern within the Main Street core area. The precise location of this street should be determined in association with the development of a Precise Plan for the assembly of sites at Serra Way and Main Street (see Policy 7.6).

Policy 4.8: Increase street capacity where feasible to accommodate vehicular demand, while maintaining reasonable pedestrian crossing distances at intersections and minimizing potential vehicle conflicts for bicyclists.

The following improvements to the street system will be required to accommodate increased traffic demand:

- Milpitas Boulevard/Jacklin Road–Abel Street: reconfigure east–west approaches to permit east–west phasing.
- Calaveras Boulevard/Abel Street: add a second eastbound left-turn lane, second westbound left-turn lane, and separate northbound right-turn lane with overlap phase.
- South Main Street/Corning Avenue: signalization.
- Tasman Drive/Alder Drive: re-stripe northbound shared through/right-turn lane as a separate right-turn lane and provide overlap phase.
- Great Mall Parkway/Abel Street: additional northbound left-turn lane.
- Montague Expressway/South Main Street: Provide overlap phase for southbound right-turn lane.
- Montague Expressway/McCandless Drive–Trade Zone Boulevard: add third eastbound mixed-flow lane on Montague Expressway (part of future widening project).
- Montague Expressway/Great Mall Parkway: add second northbound left-turn lane and separate northbound right-turn lane. Grade separation would be required to provide reasonable operations.
- Montague Expressway/Milpitas Boulevard: re-stripe center left-turn lane as shared left-turn/right-turn lane.
- South Main Street/Carlo Street: signalization.

Additional traffic generated by new development in the Midtown Area will be required to contribute its pro-rata share of the cost of needed traffic improvements.

Policy 4.9: Continue to require site specific traffic studies for each proposed new development that would generate more than 100 trips, in conformance with existing congestion management procedures.

The EIR prepared for the Specific Plan will take into account the long-term "big picture" of traffic conditions based on projected development. In addition to this, each new development that generates more than 100 peak hour (a.m. or p.m.) trips will be required to complete a site specific traffic study as part of the development review process. The purpose of the traffic study is to

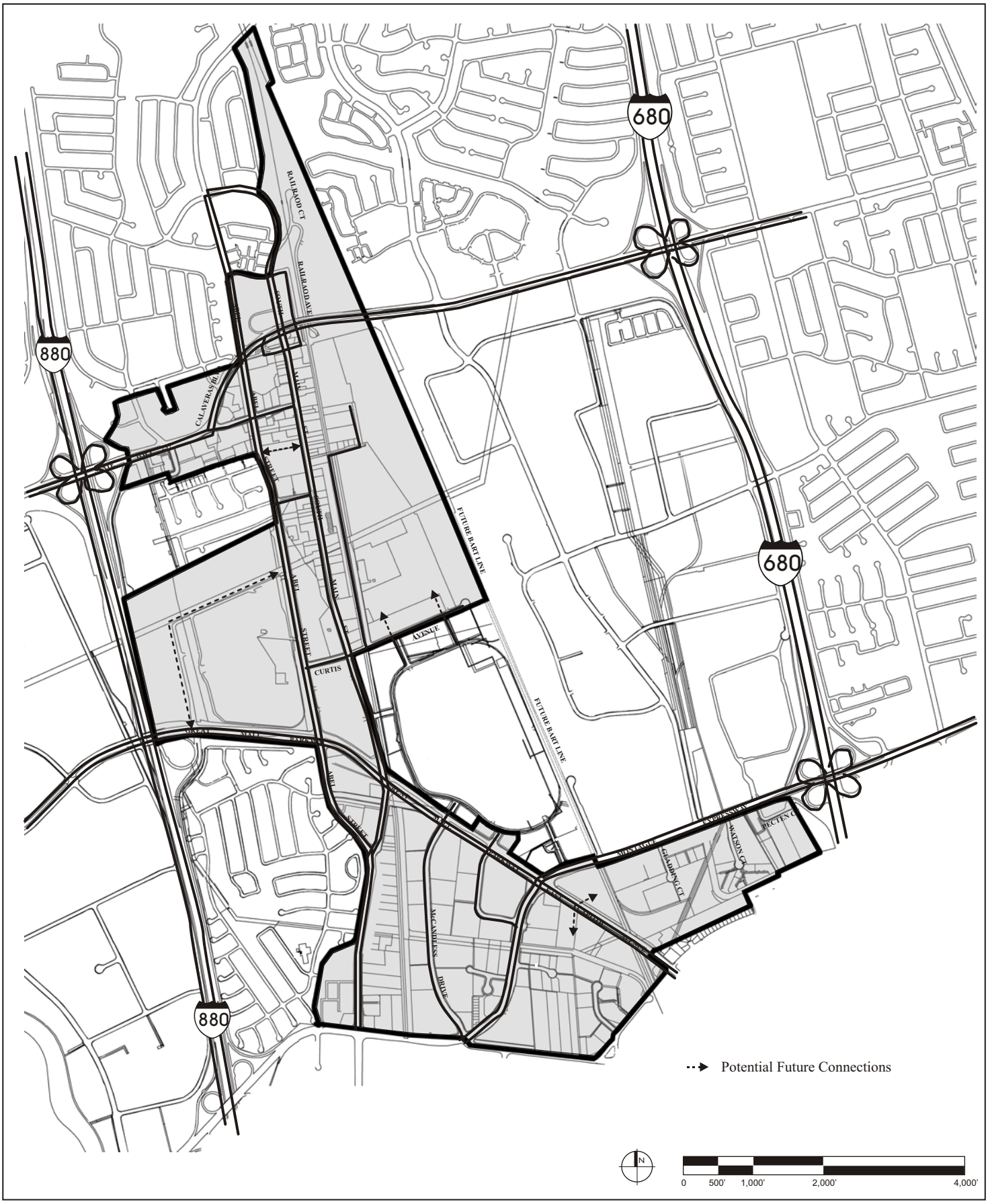

Figure 4.3: Street System Plan

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identify more detailed project specific traffic mitigations that will be necessary.

Policy 4.10: Consider long-term opportunities for an additional east–west vehicular crossing of the Union Pacific Railroad tracks between Calaveras Boulevard and Great Mall Parkway.

The two Union Pacific Railroad tracks create a barrier to east–west movement through Milpitas. In the Midtown Area, there are two routes that provide east–west movement, a grade separated-crossing at Calaveras Boulevard, and at-grade crossings at Great Mall Parkway and Montague Expressway. As the city matures and properties and uses change, the City should look for opportunities to provide an additional east–west street crossing of the tracks to improve overall circulation through Milpitas.

Policy 4.11: Reconstruct Main Street to provide an appropriate subsurface base for the street (see Policies 4.16 and 5.4; and Figure 4.6).

Main Street was formerly a regional highway—San Jose–Oakland Road. The current street section consists of asphalt over the older concrete highway. Reconstruction is needed because over the past 40 years, the street has been resurfaced several times by overlaying the existing structure with asphalt. As a result, the crown of the road is too steep for driveways and parallel parking. In addition, repeated trencing of the roadway has damaged the condition of the road surface. Differential settlement along the roadway has created many dips in the flowlines of the curbs and gutters.

Ultimately, complete reconstruction of Main Street's roadway, curb, gutters and some sidewalks will be required. Ideally, this work should be phased with other capital programs, such as streetscape improvements or extension of utilities to consolidate construction activities and minimize disruption of businesses and activities along the street.

Pedestrian and Bicycle System Policies

Improving pedestrian and bicycle circulation in the Midtown Area is a key objective. Linkages within the area and between transit stations and Main Street will serve to encourage trips by foot and bicycle. While much of the roadways have sidewalks, pedestrian volumes are light. Barriers to pedestrian use include land use patterns which are more automobile-oriented in terms of scale and density, and very wide streets with fast moving traffic which is unpleasant and unsafe for pedestrians. With the development of the transit stations and new higher density housing in the area, there is the opportunity to make it more bicycle and pedestrian-friendly and thereby support the use of alternative modes of transportation.

Policy 4.12: Add trails along the Hetch Hetchy right-of-way, through the O'Toole Elms, and a bike lane along Abel Street to the Milpitas Trail System.

The Milpitas Trails Master Plan provides for a comprehensive network of bicycle and pedestrian trails along the city's creeks, and other rights-of-way. These trails provide a system of off- and on-road trails that provide crosstown movement and ultimately connect to the Bay Trail and the Bay Area Ridge Trail. In addition to the

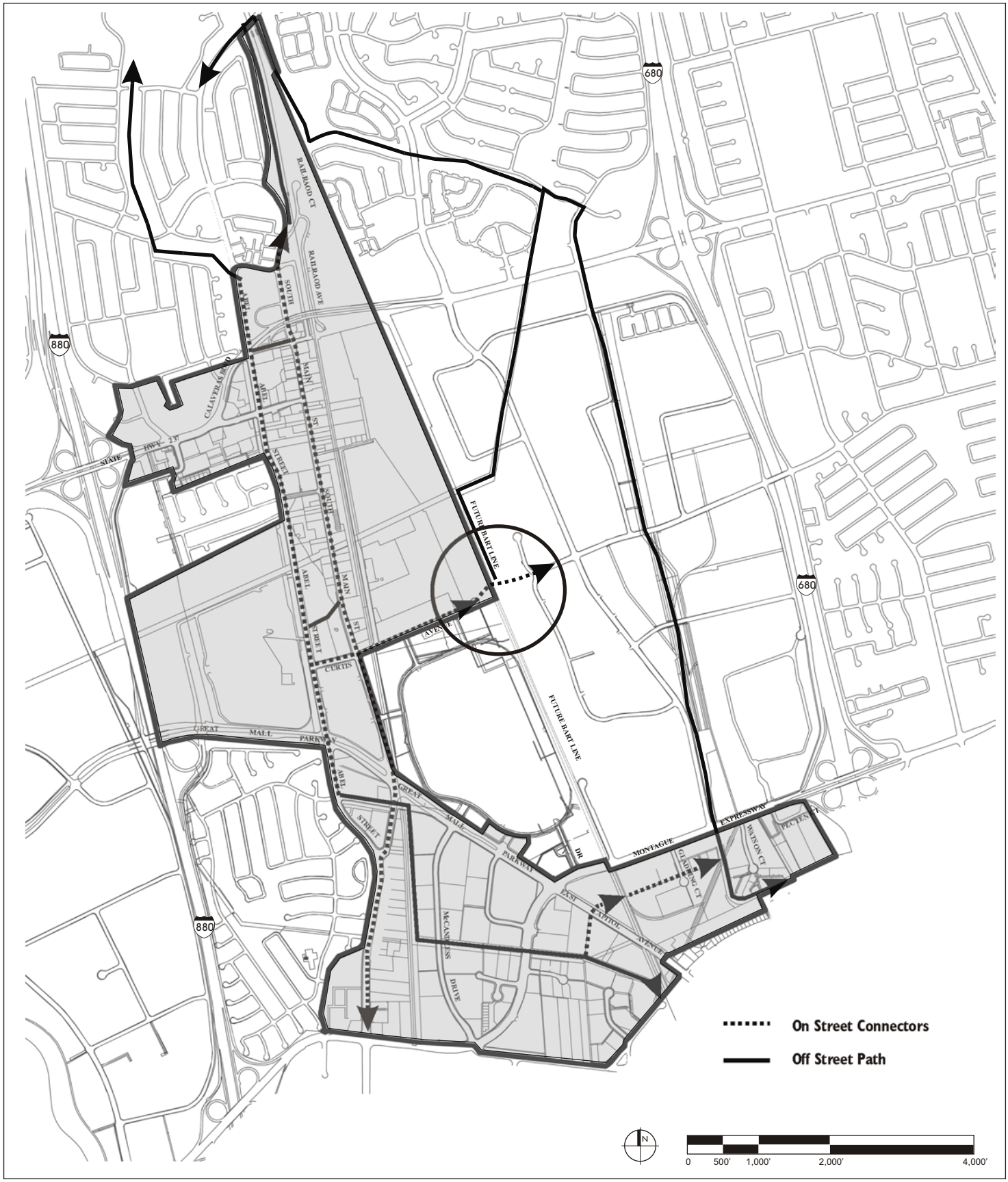

Figure 4.4: Bicycle and Pedestrian Trail

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trails set forth in the Master Plan, this Specific Plan calls for additional trails/linear parks along the Hetch Hetchy right-of-way connecting to a grade-separated crossing (at a location to be determined) through the O'Toole Elms, and between the Penitencia Creek Trail and Montague Station. These trails are shown in Figure 4.4. Existing bike lanes on Main Street would be relocated to Abel Street. Main Street would then allow for on-street parking.

Policy 4.13: Establish an interconnected system of sidewalks and pedestrian paths that provides safe and convenient pedestrian access between the transit stations and other destinations within the Midtown Area.

The circulation framework associated with new development planned around the Great Mall/ Main Street and Montague Stations should promote pedestrian and bicycle accessibility through an interconnected system of sidewalks and paths. More specifically, new residential and/or mixed-use development near the transit stations should be developed with a street and block system that provides through connections to the stations. Block and street patterns and sizes should be of a pedestrian scale, rather than internally focused "mega-block" developments (see Section 8.0 and Figure 3.2 for park locations).

The Penetencia Creek Trail/Linear Park is located in the vicinity of both stations. As new development occurs around the stations, linkages through new development between the trail and stations should be made to provide an attractive bicycle and pedestrian entry (see Policy 4.14). Over the long-term, opportunities to provide a connection (on- or off-street) between the Montague Station and the Penetencia and Berryessa Creek Trails should be explored.

Policy 4.14: Require a public access easement between Montague Station to the Union Pacific Railroad right-of-way to provide a direct pedestrian connection between the station and the potential future BART station.

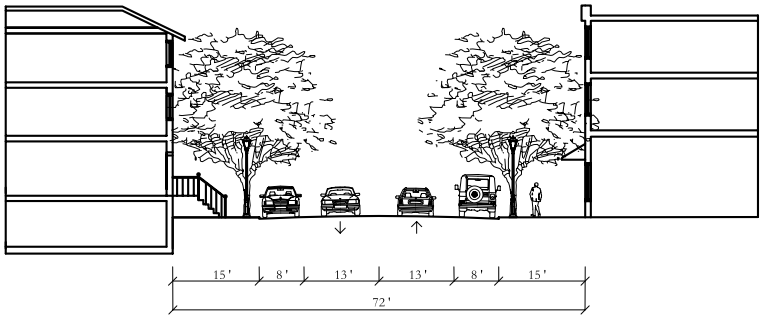
A public access easement between Montague Station to the Union Pacific Railroad right-of-way will be required in association with any new development of the adjacent land. The easement should provide for a direct linkage between the station and the right-of-way.

Policy 4.15: Require a public access easement through new developments, when necessary, to ensure that public parks and the city's trail network are accessible to the general public.

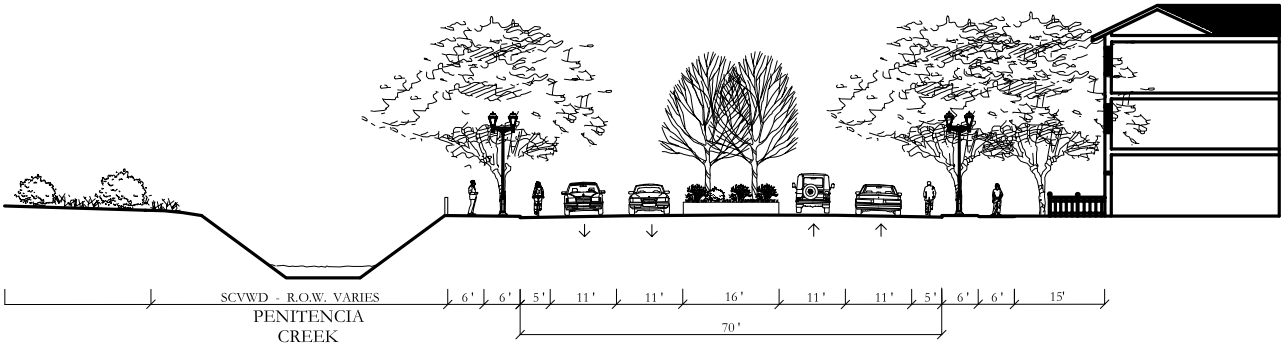
In the event that new developments with parks are created, public access easements will be required to ensure that new public parks in the area are accessible.

Policy 4.16: Implement improvements, such as bulb-outs, raised crosswalks, and other appropriate mechanisms to calm traffic and make Main Street safer for pedestrians.

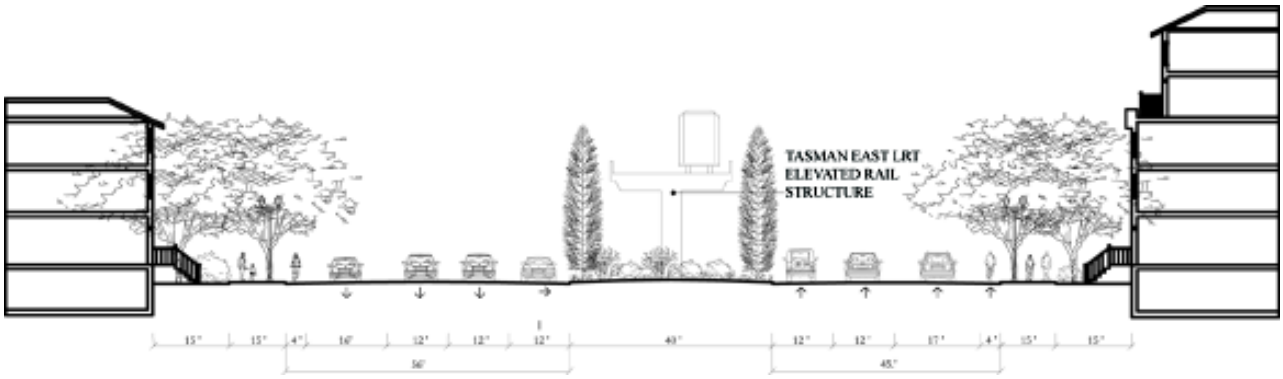
Traffic calming techniques consist of physical changes to streets and sidewalks that help to slow down vehicles and improve conditions for pedestrians and bicyclists. Streetscape improvements such as medians, on-street parking, bulb-outs and raised and/or lighted crosswalks can slow traffic and assert the presence of pedestrians.



Illustrative Street Section: Main Street

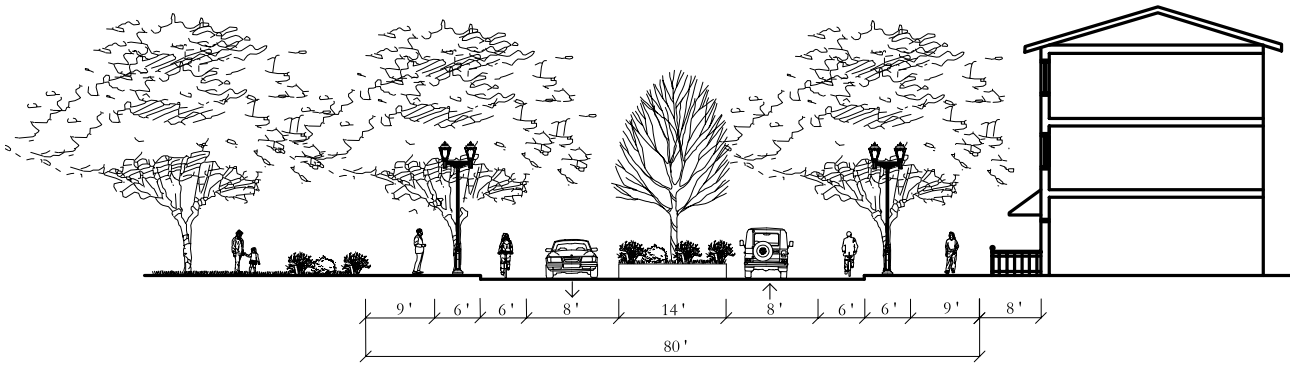


Illustrative Street Section: Abel Street
(Typical where right-of-way exists)



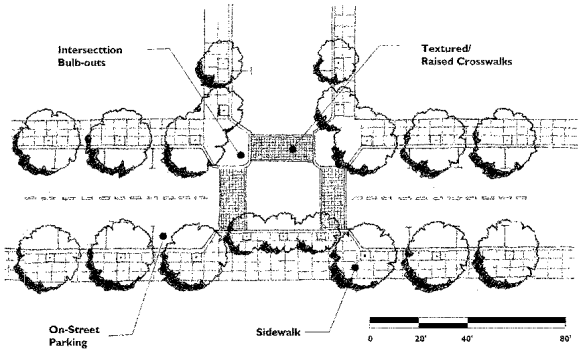
Illustrative Street Section: Great Mall Parkway

FIGURE 4.5
Illustrative Street Sections

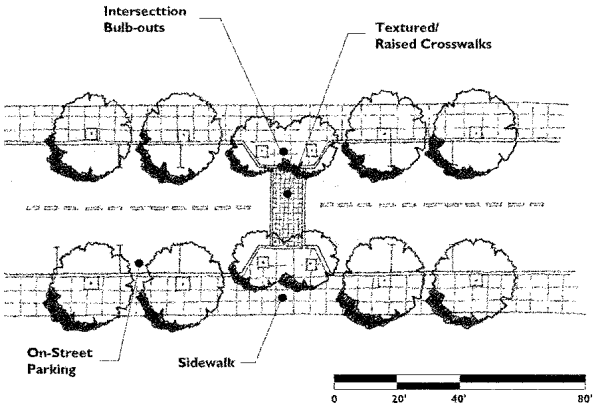


Illustrative Street Section: East Curtis Street

FIGURE 4.6
Illustrative Concepts of Street Calming on Main Street



Prototypical Street Calming Treatment at 3-Way Intersection



Prototypical Street Calming Treatment at Mid-Block Crossing

At the north leg of Main Street at Great Mall Parkway, there is the opportunity to build a landscaped median that would be beneficial to pedestrian traffic and create an appealing entry image to the Main Street area.

Bulbouts at intersections and raised or textured crosswalks at Curtis Avenue, Corning Avenue, Serra Way, Carlo and Weller Streets, and midblock crossings just north of St. John's and at the Hetch Hetchy right-of-way would provide calmed street crossings at approximately every 800 to 1,000 feet.

Near the senior center at Weller and Main Streets, additional measures, such as signage and flashing lights in addition to raised and/or lighted crosswalks, should be implemented to improve safety for seniors crossing the streets.

Policy 4.17: Provide a bicycle and pedestrian crossing at the Union Pacific Railroad tracks between Turquoise and Montague Expressway.

The Specific Plan calls for a bicycle and pedestrian crossing of the Union Pacific Railroad tracks in the vicinity of Curtis Avenue. This connection would provide a direct linkage from the eastern portion of Milpitas to Main Street, the Great Mall and the transit stations. There are several alternative routes that are under a separate study (*Bicycle/Pedestrian Overcrossing of the Union Pacific Railroad, City of Milpitas*) for this connection. It is anticipated that an alignment for the crossing will be determined as part of that study.

Policy 4.18: Provide secure and weather protected bicycle parking facilities at the transit stations and within new residential, retail and employment destinations.

Secure and conveniently located bicycle parking facilities shall be provided at transit stations and in new residential and employment developments with parking structures. As a guideline, the number of bicycle spaces should be equivalent to at least 5% of the overall parking requirements. At large employment destinations (greater than 50,000 square-feet), showers and lockers should be provided in addition to bicycle parking.

Along Main Street (between Weller Street and Curtis Avenue) bicycle racks should be placed on every block as a part of streetscape improvements, for the joint use of all nearby tenants, rather than providing bicycle parking on a business-by-business basis.

Parking Policies

Policy 4.19: Ensure that new development complies with City of Milpitas Zoning Ordinance requirements for off-street parking. Consider reductions on a case-by-case basis.

Where it serves a public benefit, adjustments to parking standards may be considered for developments that are located in the TOD overlay zone, due to the proximity of LRT in the mixed-use district (see Policy 4.21). Street parking may be credited for retail uses along its frontage. Additionally, shared parking may occur for complementary uses with off-setting demand, which peak at different times.

Policy 4.20: Consider credit for on-street public parking directly adjacent to a retail development to meet overall development parking requirements.

The City may credit on-street parking along the property frontage on Main Street toward the overall parking requirements for retail, restaurants, beauty parlors, and other similar neighborhood serving commercial uses. Parking along Main Street should be primarily directed toward short-term retail users, and not employees of businesses which would use the parking for several hours. Therefore, meters, or other time limits on on-street parking should be implemented. This parking would remain, however, open for unrestricted use (i.e., parking is not restricted to one particular business).

Policy 4.21: Provide on-street parking on both sides of Main Street between Weller Street and Curtis Avenue.

On-street parking along Main Street (between Weller Street and Curtis Avenue) is an important part of the concept for the area. A traditional retail "Main Street" is composed of buildings that form a streetwall with active frontage (i.e., storefront windows, active uses, and entries), an attractive sidewalk environment (street trees and benches), and on-street parking. Along Main Street in Milpitas, on-street parking is recommended to be parallel (see Figure 4.5), because the right-of-way is too narrow for angled parking. The parking lane will require the relocation of bike lanes on Main Street to Abel Street, and Main Street will become a signed bicycle route.

Policy 4.22: Work with the VTA and BART to allow the shared use of park and ride and transit station parking for off-peak users. In the future, design parking facilities to be compatible with adjacent areas and to reinforce the pedestrian environment.

The VTA operates a park and ride lot on City-owned property in the vicinity of North Main Street under the Calaveras Overpass. In the future, this lot would help supplement parking supplies in the Main Street mixed-use corridor. At the Great Mall, the VTA will provide a park and ride facility that will accommodate 150 cars. During off-peak periods, these parking facilities could be used for retail, cinema and entertain-

ment uses which are established at the nearby retail centers that generally peak during non-commute periods. In the future, it may be desirable to provide shared parking between the transit station and residential or commercial uses within new developments.

Transportation Demand Management Policies

Policy 4.23: Require new development within the Midtown Area to encourage the use of alternative modes of transportation through programs such as carpool parking, the VTA's EcoPass Program, shuttles to transit stations and lunchtime destinations, alternative work schedules, telecommuting, etc.

Transportation Demand Management (TDM) refers to specific measures that are aimed at discouraging individuals from driving in favor of travel by alternative modes, including transit, walking and bicycling. TDM measures are especially effective at large employment sites where there is a high density of employees. In the Midtown Area, where there will be several options for transit service, incentives should be provided to encourage the use of these alternative modes of travel.

Notes:

1 Association of Bay Area Governments (ABAG). *Bay Area Futures: Where Will We Live and Work?* November 1997.

2 Bernick, Michael and Robert Cervero. "Transit Villages in the 21st Century." New York, 1996.

3 American Public Transit Association (APTA). *Transit Ridership Report.*

4 Santa Clara Valley Transportation Authority (VTA). *Bicycle Technical Guidelines, A Guide for Local Agencies in Santa Clara County.* September 1999.